

I claim:

1. A circuit configuration, comprising:

an intelligent power semiconductor having a single diagnostic output, a logic element, and a power switch for switching a load, a current source, and a current sink; the load, the current source, and the current sink being connected to a single diagnostic output and providing a current at the diagnostic output; said logic element for controlling at least one of said power switch, and the current source and the current sink; and

a display element having a light-emitting semiconductor diodes, a first terminal, and a second terminal; said first terminal electrically connected to said single diagnostic output of said semiconductor element; said second terminal electrically connected to the load output of said power switch; and said light-emitting semiconductor diodes being connected in antiparallel between said first terminal and said second terminal and outputting different visual information items when receiving different currents.

2. The circuit configuration according to claim 1, wherein the current source and the current sink provide a current at said single diagnostic output having an intensity and flow

direction, the intensity and flow direction providing an item of information regarding a status of said power switch.

3. The circuit configuration according to claim 2, wherein said power switch connects to the load.

4. The circuit configuration according to claim 2, wherein said semiconductor element connects to the load.

5. The circuit configuration according to claim 1, wherein the current source and current sink are disposed in a half-bridge configuration relative to one another having a center tap, the center tap being connected to said single diagnostic output.

6. The circuit configuration according to claim 1, wherein the current source is a MOSFET.

7. The circuit configuration according to claim 1, wherein the current sink is a MOSFET.

8. The circuit configuration according to claim 1, wherein the current source and the current sink are MOSFETs.

9. The circuit configuration according to claim 1, wherein said intelligent power semiconductor includes an input terminal, an output terminal connected to the load, and a supply terminal for receiving a supply potential.

10. The circuit configuration according to claim 9, wherein said intelligent power semiconductor is a low-side switch having a single supply terminal, at which a first supply potential is present, and outputting a second supply potential at said output terminal.

11. The circuit configuration according to claim 10, wherein at least one of the current source and the current sink is connected directly and electrically to said input terminal.

12. The circuit according to claim 1, wherein said power switch is a power semiconductor component.

13. The circuit according to claim 12, wherein said power semiconductor component is a power MOSFET.

14. A display element for diagnosing and displaying a disturbance in an intelligent power semiconductor, the display element comprising:

an input terminal for connecting to an intelligent power semiconductor;

a supply terminal for receiving a supply potential; and

light-emitting semiconductor diodes being connected in antiparallel between said input terminal and said supply terminal; said light-emitting semiconductor diodes outputting differing light signals as a function of a disturbance of the intelligent power semiconductor upon receiving a diagnostic signal fed through said input terminal.

15. The display element of claim 14, wherein the differing light signals differ in intensity.

16. The display element of claim 14, wherein the differing light signals differ in color.

17. The display element of claim 14, wherein the differing light signals differ in intensity and color.

18. The display element according to claim 14, including an optocoupler.

19. The display element according to claim 18, wherein at least one of said light-emitting semiconductor diodes is integrated in said optocoupler.

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